

# Request Request Request Request Request Request



## PCI-SIG ENGINEERING CHANGE REQUEST

<b>TITLE:</b>	OCuLink 1.0 Footprint Appendix R1.4
<b>DATE:</b>	September 12, 2017
<b>AFFECTED DOCUMENT:</b>	OCuLink 1.0
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### **Part I:**

#### **1. Summary of the Functional Changes**

This ECR adds an appendix to the OCuLink 1.0 Specification which contains example footprints for fixed host board-side connector hold-downs. Hold-down features were previously listed as normative, but the industry demanded flexibility to accommodate different applications. Hold-down features have thus been moved to an appendix; they are informative and are provided for reference only.

#### **2. Benefits as a Result of the Changes**

Moving hold-down features to an informative appendix allows for flexibility in how connectors are attached to PCBs. This allows the OCuLink solution to be tailored to specific applications.

#### **3. Assessment of the Impact**

Drawings and dimensions for x4 fixed footprints have been added in an informative appendix.

#### **4. Analysis of the Hardware Implications**

Connector manufacturers are able to tailor OCuLink solutions to best fit implementer needs on an application-basis.

#### **5. Analysis of the Software Implications**

None, this change does not affect software.

### **Part II:**

The following Appendix is to be added to the OCuLink Specification.

## Appendix G - Informative Footprints

The OCUlink Specification does not dictate how fixed host board-side connectors are attached to PCBs. The following informative footprints are provided as reference to complement the normative footprint features provided in Section 4. Other hold-downs are permitted as long as the form factor dimensions listed in Sections 4.1 and 4.2 are satisfied and the performance requirements listed in Section ## [EDITORS NOTE: Point to "Performance Requirements for Connectors and Cables" section.] are met.

### G.1. Example Footprints for Fixed Host Board-side Vertical Connectors

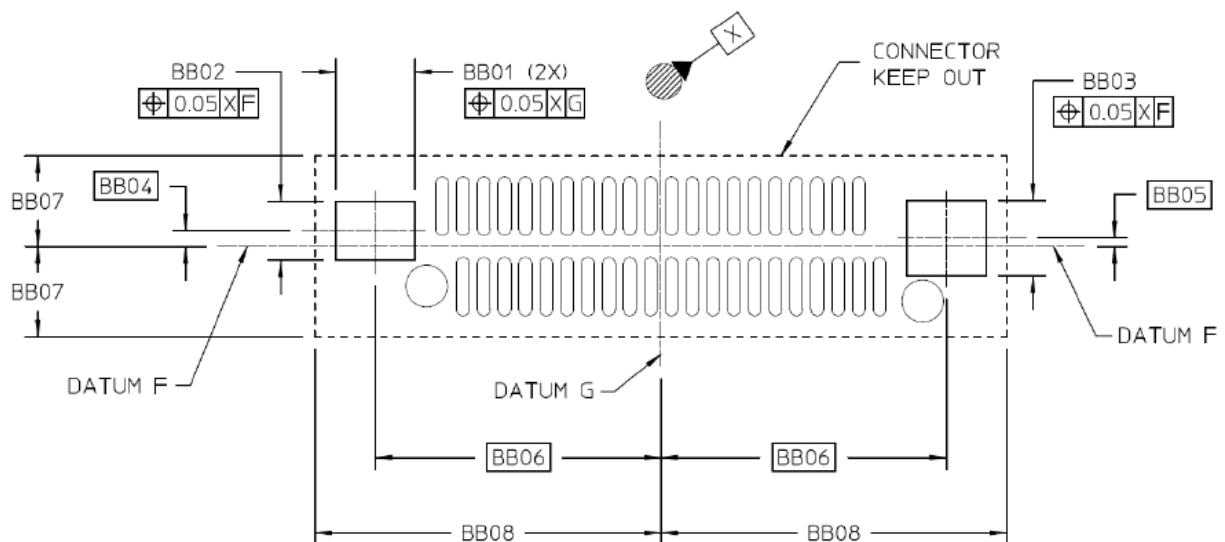
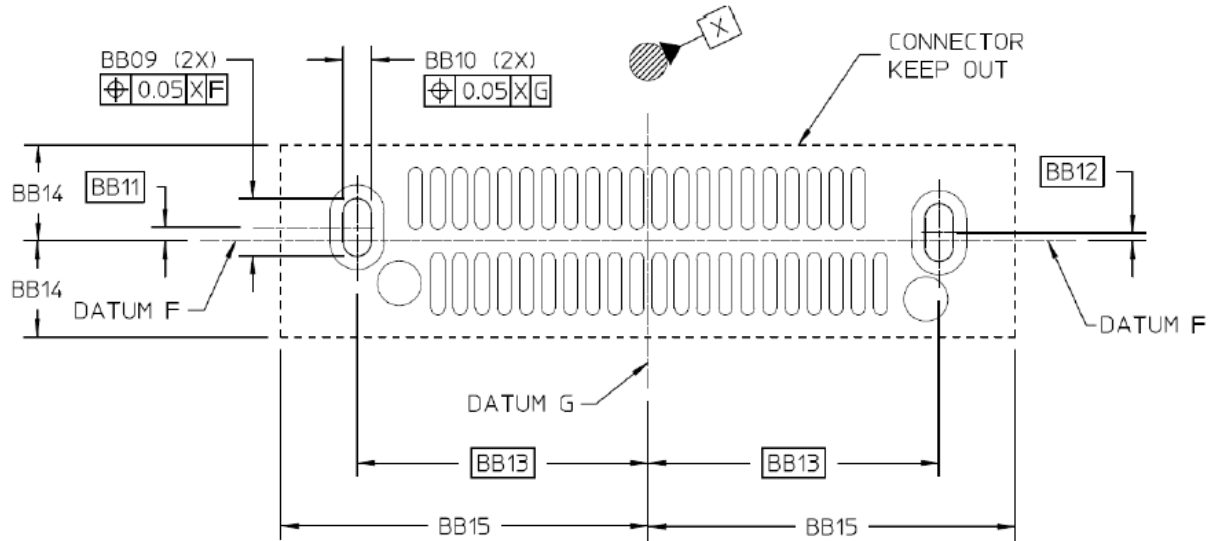


Figure G-1. Example SMT Footprint for Vertical Connectors

# Request Request Request Request Request Request Request



**Figure G-2. Example Through-Hole Footprint for Vertical Connectors**

# Request Request Request Request Request Request

**Table G-1. Dimensions for Example Footprints for Fixed Host Board-side Vertical Connectors**

ID	Description	Dimension	Tolerance $\pm$
<b>SMT Shell Hold-Downs</b>			
BB01	Width of shell solder pad (2X)	1.90	0.10
BB02	Height of left shell solder pad	1.40	0.10
BB03	Height of right shell solder pad	1.80	0.15
BB04	Horizontal CL of solder pad array (Datum F) to CL of left shell solder pad	0.37	Basic
BB05	Horizontal CL of solder pad array (Datum F) to CL of right shell solder pad	0.20	Basic
BB06	Vertical CL of solder pad array (Datum G) to CL of shell solder pad (2X)	6.85	Basic
BB07	Horizontal CL of solder pad array (Datum F) to edge of keep-out zone height	2.16	0.07
BB08	Vertical CL of solder pad array (Datum G) to edge of keep-out zone width	8.30	0.07
<b>Through-Hole Shell Hold-Downs</b>			
BB09	Length of shell through-hole (2X)	1.30	0.10
BB10	Width of shell through-hole (2X)	0.64	0.10
BB11	Horizontal CL of solder pad array (Datum F) to center of left shell through-hole	0.31	Basic
BB12	Horizontal CL of solder pad array (Datum F) to center of right shell through-hole	0.19	Basic
BB13	Vertical CL of solder pad array (Datum G) to center of shell through-hole	6.58	Basic
BB14	Horizontal CL of solder pad array (Datum F) to edge of keep-out zone height	2.16	0.07
BB15	Vertical CL of solder pad array (Datum G) to edge of keep-out zone width	8.30	0.07

Request Request Request Request Request Request Request

## G.2. Fixed Host Board-side Right-angle Connector Example Footprints

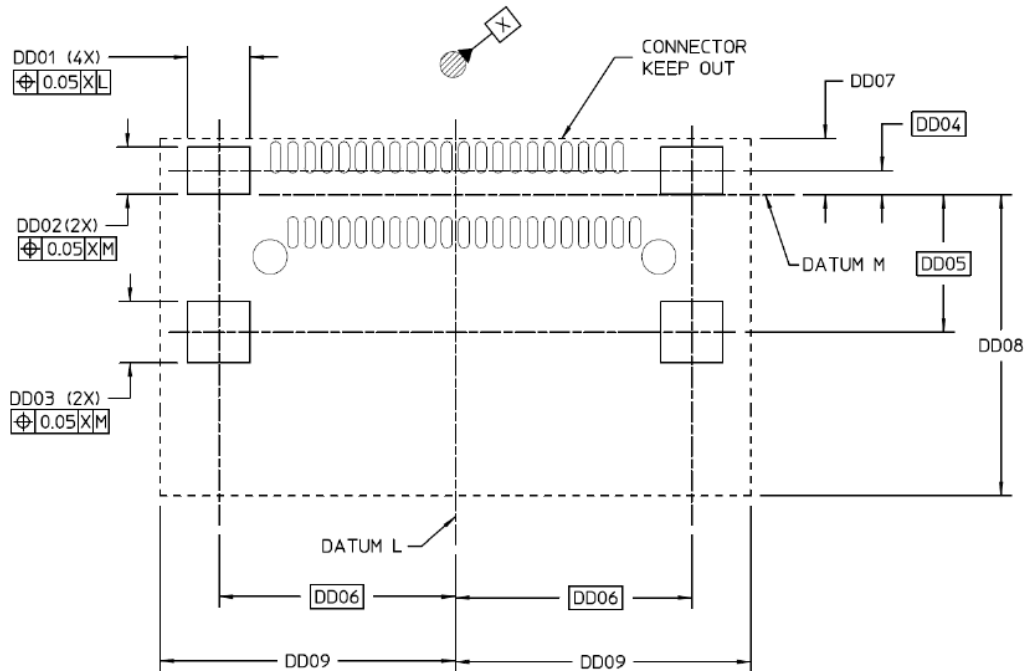


Figure G-3. Example SMT Footprint for Right-angle Connectors

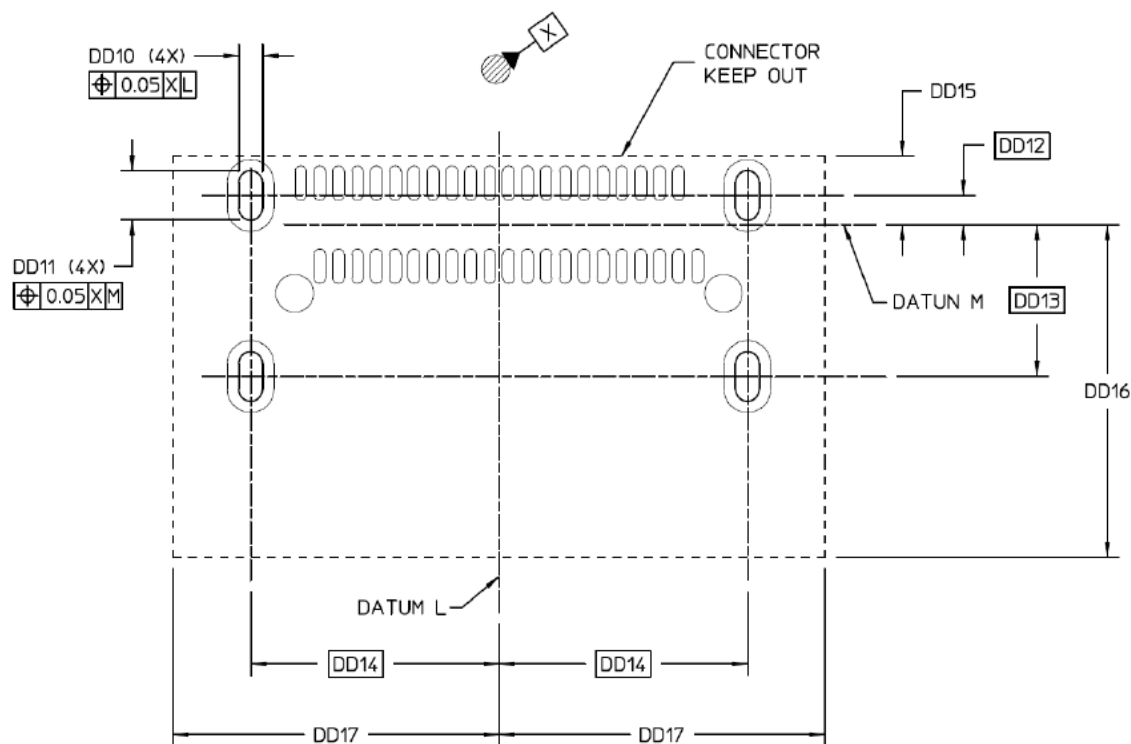


Figure G-4. Example Through-Hole Footprint for Right-angle Connectors

# Request Request Request Request Request Request

**Table G-2. Dimensions for Example Footprints for Fixed Host Board-side Right-angle Connectors**

ID	Description	Dimension	Tolerance $\pm$
<b>SMT Shell Hold-Downs</b>			
DD01	Width of shell solder pad (4X)	1.81	0.10
DD02	Height of small shell solder pad (2X)	1.38	0.10
DD03	Height of large shell solder pad (2X)	1.80	0.10
DD04	Horizontal CL of solder pad array (Datum M) to CL of small shell solder pad	0.71	Basic
DD05	Horizontal CL of solder pad array (Datum M) to CL of large shell solder pad	4.01	Basic
DD06	Vertical CL of solder pad array (Datum L) to CL of shell solder pad	6.91	0.05
DD07	Horizontal CL of solder pad array (Datum M) to back of keep-out zone height	1.64	0.10
DD08	Horizontal CL of solder pad array (Datum M) to front of keep-out zone height	8.78	0.10
DD09	Vertical CL of solder pad array (Datum L) to edge of keep-out zone width	8.63	0.07
<b>Through-Hole Shell Hold-Downs</b>			
DD10	Width of shell through-hole (4X)	0.64	0.10
DD11	Length of shell through-hole (4X)	1.30	0.10
DD12	Horizontal CL of solder pad array (Datum M) to center of back shell through-holes	0.71	Basic
DD13	Horizontal CL of solder pad array (Datum M) to center of front shell through-holes	4.01	Basic
DD14	Vertical CL of solder pad array (Datum L) to CL of shell through-hole	6.91	0.05
DD15	Horizontal CL of solder pad array (Datum M) to back of keep-out zone height	1.64	0.10
DD16	Horizontal CL of solder pad array (Datum M) to front of keep-out zone height	8.78	0.10
DD17	Vertical CL of solder pad array (Datum L) to edge of keep-out zone width	8.63	0.07